NORTEL NETWORKS

Enterprise Edge
Call Detail Recording
System Administration Guide

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Introduction

About Enterprise Edge Call Detail Recording

Enterprise Edge Call Detail Recording is an application that records and reports call activity. Each time a telephone call is made to or from your company, you can record the information about the call. When the call is completed, you can print information about the call in a report. Enterprise Edge Call Detail Recording can also provide information on incoming calls as the events occur. This information is recorded in a Real Time Call record.

Enterprise Edge Call Detail Recording provides information about:

- date and time of the call, and digits dialed
- the originating and the terminating line or station set
- whether an incoming call was answered
- elapsed time between origin of a call and when it was answered
- whether a call was transferred or put on hold
- call duration
- calls associated with Account codes
- incoming call Calling Line Identification (CLID) information
- Bearer Capability of the line in the call
- Hospitality records for room occupancy status
- Real Time records for ringing, DNIS, answered, unanswered, transferred, and released events for incoming calls with CLID information and Hospitality room occupancy status

Note: Enterprise Edge Call Detail Recording delivers Custom Local Area Signalling Services (CLASS), Call Management Services (CMS), Automatic Number Identification and Dialed Number Identification Services (DNIS) in the form of CLID reports. This information is available only if the appropriate Enterprise Edge server hardware is installed and the service is available from your public telephone company. Contact your Customer Service representative for more information.

You can use information collected by Enterprise Edge Call Detail Recording to:

- allocate telephone costs to departments or individuals
- charge back telephone costs to billable clients through Account codes
- determine whether the telephone system is being used efficiently

- guard against abuse of the telephone system
- provide immediate call information to database applications through Real Time call records
- track changes in room occupancy status

Your Role as System Administrator

As System Administrator, you perform the initial and ongoing administration tasks. Your tasks include:

- administering Enterprise Edge Call Detail Recording
- determining Account codes used as references for tracking telephone calls
- interpreting reports

SECURITY ALERT: Enterprise Edge Call Detail Recording provides information such as the date and time of the call, digits dialed, incoming call information and call time elapsed. This includes sensitive and personal information such as telephone banking numbers, credit card numbers and personal identification numbers. Digits dialed are not maintained as confidential.

As System Administrator it is solely your responsibility to advise the system users that their telephone dialing information can be monitored and recorded.

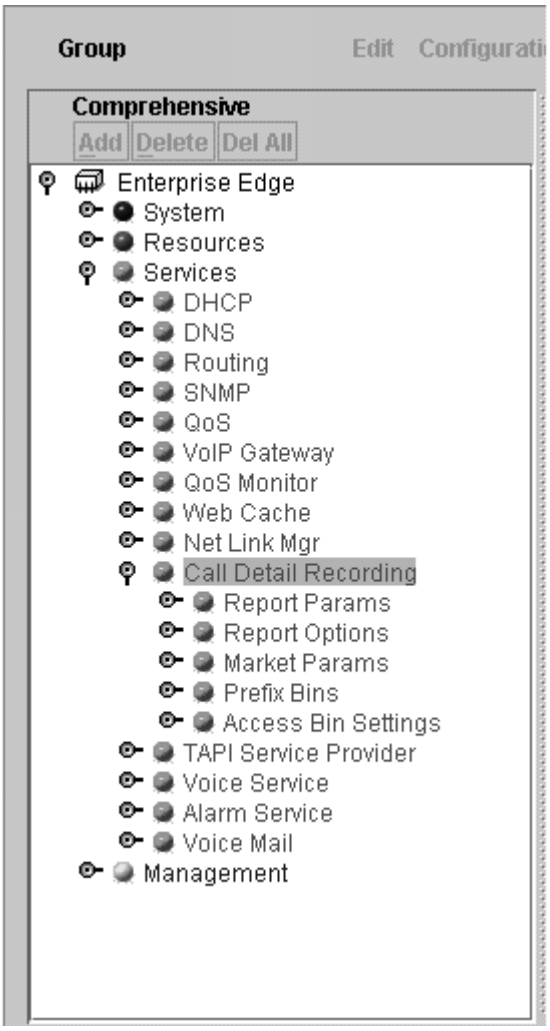
Further, LAN based access to call records (passive or real time) demands a greater emphasis on call record security. Limitations and security arrangements can vary depending on the network environment and how the customer administers and limits access to the call records. Consult with the appropriate members of your organization regarding the proper safeguards.

Enterprise Edge Unified Manager

After you open Enterprise Edge Unified Manager, the Comprehensive window appears. The Enterprise Edge navigation tree shows the following four keys:

- System
- Resources
- Services
- Management

The Comprehensive window



1. On the navigation tree click the Enterprise Edge key and then click the **Services** key.

2. Click the **Call Detail Recording** key.
   The Summary window appears.

The Summary window

The Summary window shows the following four parameters:

Summary

- Name
- Status
- Version
- Description

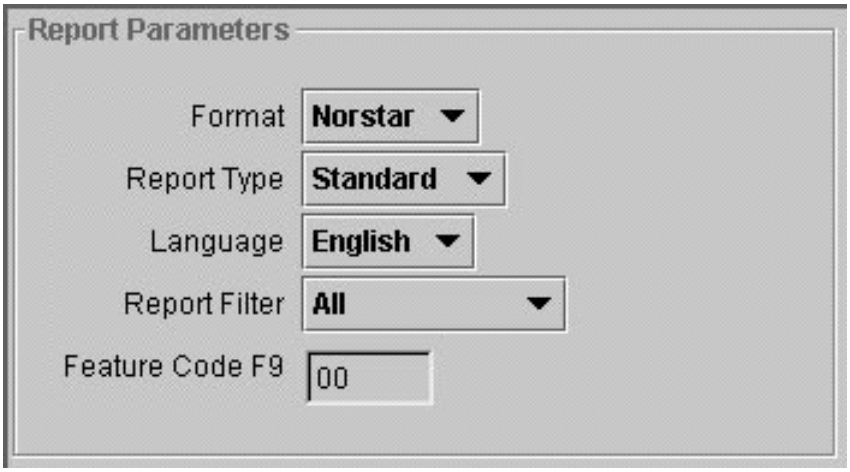
The Enterprise Edge Call Detail Recording keys

From the Services folder, click the **Call Detail Recording** key.
Call Detail Recording shows the following five keys:

- Report Parameters
- Report Options
- Market Parameters
- Prefix Bin Settings
- Access Bin Settings

When you click on a key the window for that item appears.

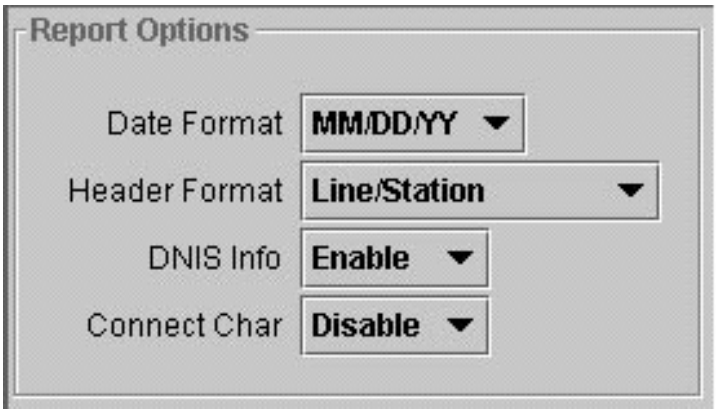
The Report Parameters window



Use the Report Parameters window to configure the following parameters:

Format	Report Type	Language	Report Filter	Feature Code
SL-1	SL-1 Standard	English	All	F900-999
	SL-1 CLID	French	Outgoing	
Norstar	Norstar Standard	Danish	Prefix	
	Norstar CLID	Swedish	Account Code	
	Norstar Real Time	Dutch		
	Norstar All			

The Report Options window

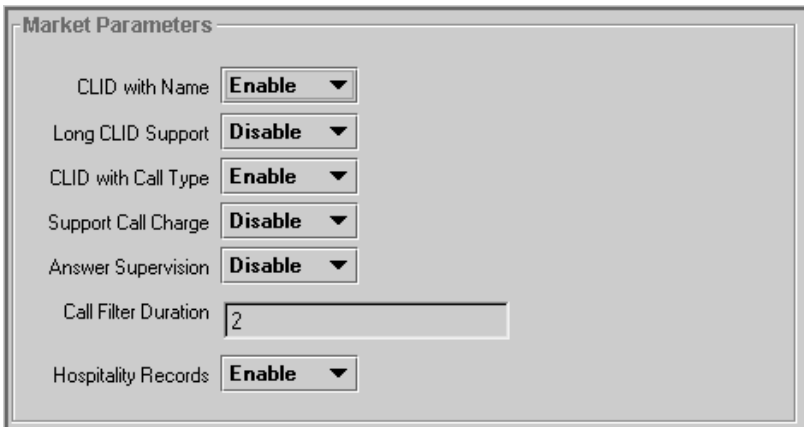


Use the Report Options window to configure the following parameters:

Date Format	Header Format	DNIS Info	Connect Char
MM/DD/YY	Line/Station	Disable	Disable
DD/MM/YY	Source/Destination	Enable	Enable
YY/MM/DD			

Note: Some of the above parameters are market specific. If the parameter value doesn't match the trunk property, Enterprise Edge Call Detail Recording can produce incorrect reports. If you are using a Call Accounting package to process reports, consult your software vendor before you make any changes.

The Market Parameters window

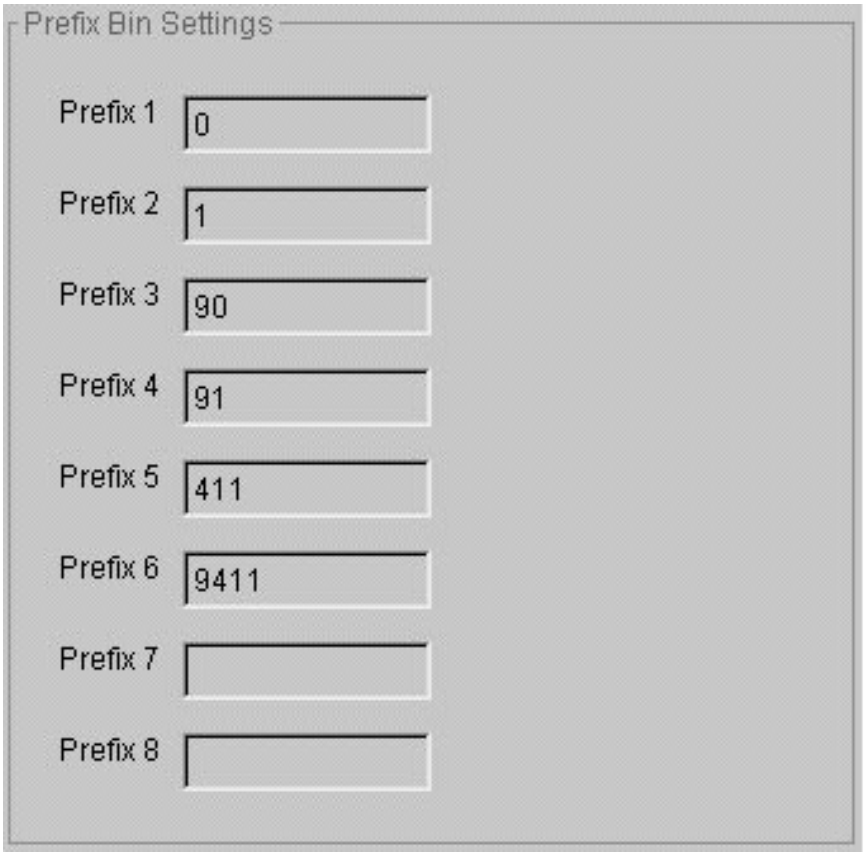


Use the Market Parameters window to configure the following parameters:

CLID with Name	Long CLID Support	CLID with Call Type	Support Call Charge	Answer Supervision	Call Filter Duration	Hospitality Record
Disable	Disable	Disable	Disable	Disable	0-30 Sec.	Disable
Enable	Enable	Enable	Enable	Enable		Enable

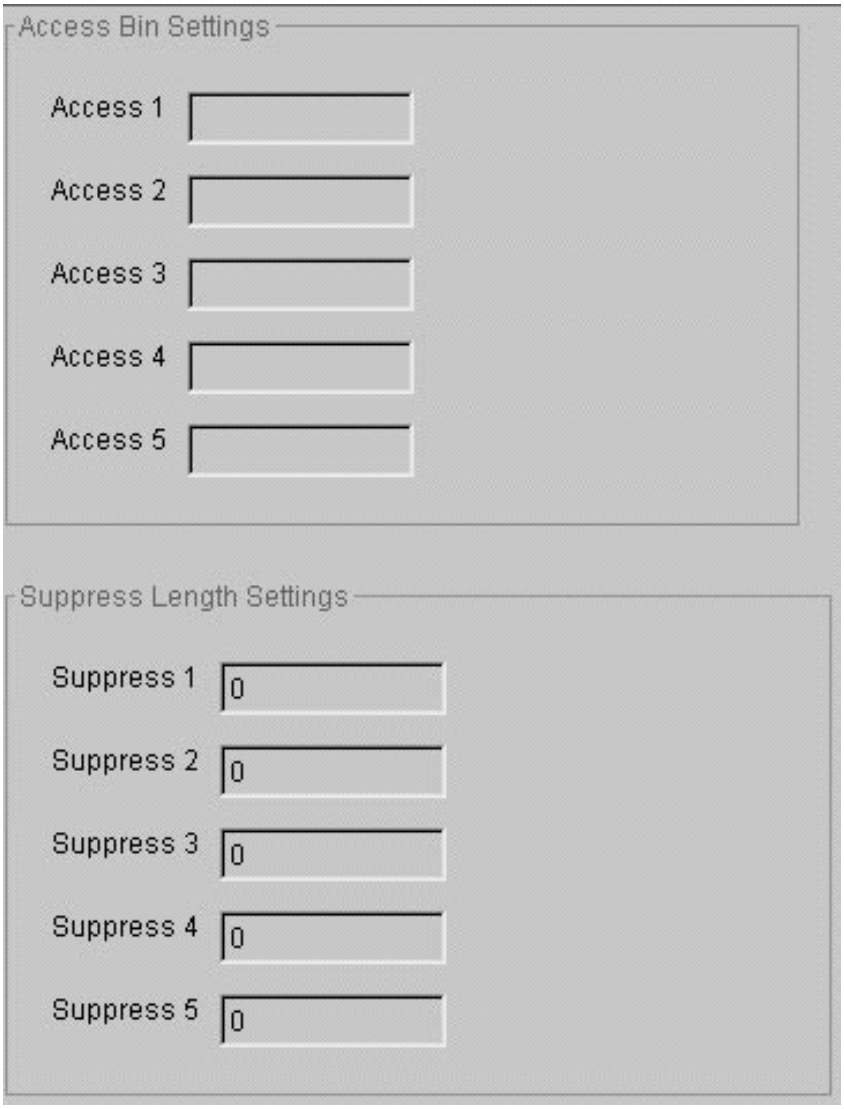
Note: Some of the above parameters are market specific. If the parameter value doesn't match the trunk property, Enterprise Edge Call Detail Recording can produce incorrect reports. If you are using a Call Accounting package to process reports, consult your software vendor before you make any changes.

The Prefix Bin Settings window



Use the Prefix Bin Settings window to configure the Prefix parameters 1 to 8.

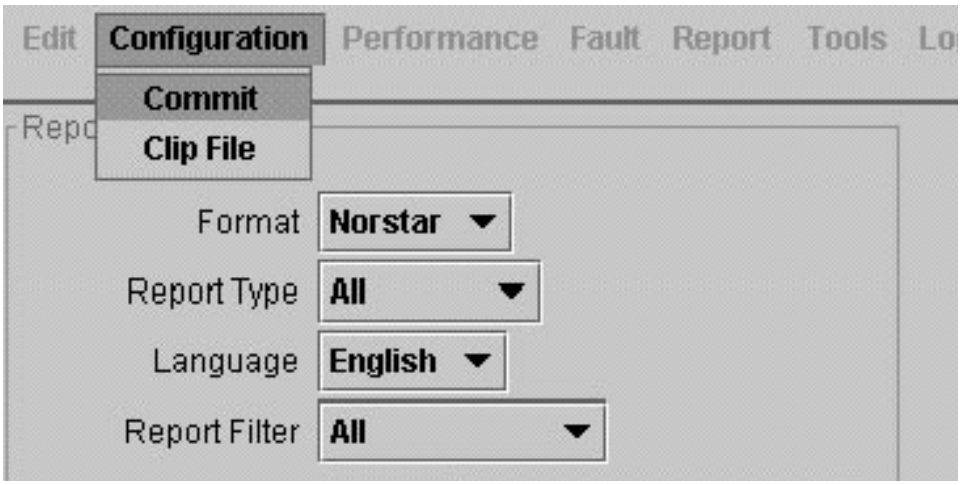
The Access Bin Settings and Suppress Length Settings window



Use the Access Bin Settings window to configure parameters for Access Bin Settings 1 to 5 and Suppress Length Settings 1 to 5.

The Commit window

Under Enterprise Edge Unified Manager, Call Detail Recording Administration maintains a copy of all options and parameters internally. Changes made are not applied until the Commit option is selected or the system is rebooted. Make the changes required to all parameters. When changes are complete, select Commit to apply the changes.



To make and apply changes:

1. From the **Enterprise Edge** key, click the **Services** key.

2. Click the **Call Detail Recording** key.

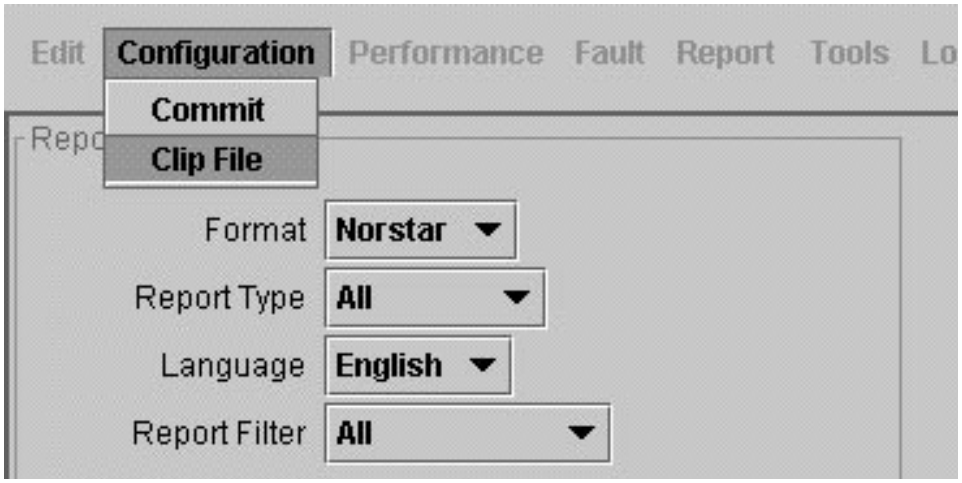
3. Click **Report Parameters**.
   The Report Parameters window opens.

4. From the **Configuration** menu, choose **Commit**.

Changes made to parameters are applied and a new header is generated in the **Call Detail Recording** log file.

The Clip File window

The current file log is not accessible when Enterprise Edge Call Detail Recording Service is running. Under the Enterprise Edge Unified Manager, Call Detail Recording Administration closes the current log file and creates a new log file, with a new header, while Service is running. Files are automatically clipped at 1.4 M.



To clip the file log:

1. From the **Enterprise Edge** key, click the **Services** key.

2. Click the **Call Detail Recording** folder.

3. Click any one of the five keys.
   A window opens.

4. From the **Configuration** menu, choose **Clip File**.

The format for the data file extension created is YYYYMMDDHHMMSS. Files are stored in the Data Directory specified during installation. The recommended default is D:\Data Files\Nortel Networks\Call Detail Recording.

Configure Enterprise Edge Call Detail Recording

Enterprise Edge keys

In the Enterprise Edge Call Detail Recording comprehensive keys:

- Report Parameters
- Report Options
- Market Parameters
- Prefix Bin Settings
- Access Bin Settings

Enterprise Edge Call Detail Recording uses configuration parameters to specify the kinds of calls to be reported as well as the report type and format. Each parameter can be changed at any time.

Components of the Report Parameters window

Report formats and types

Enterprise Edge Call Detail Recording generates both Norstar and SL-1 report types. SL-1 offers two report formats: Standard and CLID. Norstar offers four report formats: Standard, CLID, Real Time and All.

Note: The Report format default is SL-1. The Report type default is Standard.

SL-1 report formats

Assign the SL-1 report format from the Report Parameters window. There are two choices. Select one of the following:

- Standard
- CLID

To assign or change a Report Parameters:

1. Click the **Report Parameters** key.
   The Report Parameters window opens.

2. In the **Format** list box, select **SL-1**.

Note: Enterprise Edge Call Detail Recording reports only the CLID Information for lines that are capable of delivering CLID. Calls on non-CLID capable lines are reported in SL-1 Standard report format.

SL-1 report type

Use the SL-1 report type when you are supplying the Enterprise Edge Call Detail Recording output to legacy commercial call accounting packages or equipment.

This report type supports recording Standard report format as well as Calling Line Identification (CLID) report format.

The SL-1 CLID report prints the CLID information only if the information is delivered. Otherwise, it records the call in SL-1 Standard report format.

The SL-1 report type does not support the recording of Bearer Capability and DDI Busy reports.

Norstar report formats

Assign the Norstar format from the Report Parameters window. There are four choices. Select one of the following:

- Standard
- CLID
- Real Time
- All (includes Standard call information with CLID and Real Time call information)

To assign or change a Report Parameters:

1. Click the **Report Parameters** key.
   The Report Parameters window opens.

2. In the **Format** list box, select **Norstar**.

Norstar report type

Use the Norstar reports for more detailed and concise call reports.

Report Language

If your Enterprise Edge server supports other languages, select either English or one of the alternate languages. The Report Language default is English.

To assign or change the Report Language:

1. Click the **Report Parameters** key.
   The Report Language window opens.

2. From the **Report Language** list box, select **English** or an alternate language.

Note: The Report Language you select only affects Enterprise Edge Call Detail Recording reports. The language used in the windows and options is determined by the language assigned to each telephone. Changing this parameter affects both the Enterprise Edge Call Detail Recording reports and the telephone prompts used to enter Account codes.

Report Filter

The Report Filter option allows you to specify the type of calls to be collected. Select one of the following:

- All calls
- Outgoing calls only
- Calls that match the prefix strings on long distance
- Calls with Account codes only

Only one of the above reports can be selected at a time. The Report Filter default is All and can be changed from the Enterprise Edge Call Detail Recording Report Parameters window.

All

Enterprise Edge Call Detail Recording reports all incoming and outgoing calls.

Outgoing Calls

Enterprise Edge Call Detail Recording reports only outgoing calls. Incoming calls are not reported.

Prefix

Enterprise Edge Call Detail Recording reports calls matching the pre-determined long distance digit strings.

If you select the Prefix Report filter, you must also specify the prefix digits. The purpose of the Prefix option is to report only long distance calls, calls to certain area codes or calls to specific numbers.

If the first digits dialed match one or more of the programmable prefix strings, the call is reported, otherwise the call is not reported. You can have a maximum of eight prefix strings assigned at one time. The maximum length for each prefix string is eight digits.

Note: The Prefix filter defaults are 0, 1, 90, 91, 411 and 9411. The maximum number of digits allowed is eight. Invalid Password attempts are reported regardless of the Report Filter selected.

Account Code

Enterprise Edge Call Detail Recording reports only calls with account codes associated with them.

To assign or change a Report Filter:

1. Click the **Report Parameters** key.
   The Report Parameters window opens.

2. In the **Report Filter** option, select **All**, **Outgoing**, **Prefix** or **Account Code**.

3. Click the **OK** button.

Account Code Feature Code

Account Codes allow you to cross-reference telephone calls from your company to different clients or for telephone activities.

Before Account Codes can be entered by users, a Feature Code must be established. This Feature Code is any number between 900 and 999 and ranges from one to 12 digits long. The Feature Code default is the first available Feature Code from the Enterprise Edge server (usually 900).

When Enterprise Edge Call Detail Recording is connected to the server, a default Feature Code is requested from the Enterprise Edge server. View or modify the Feature Code from the Enterprise Edge Call Detail Recording Report Parameters window.

To assign or change the Feature Code:

1. Click the **Report Parameters** key.
   The Report Parameters window opens.

2. In the **Feature Code** list box, enter any number between 00 and 99. The first digit (9) is provided.

Now users can enter the appropriate Account Code to the call.

Account Code list

Account Codes create a reference for tracking telephone calls. For example, someone contacting a billable client enters an assigned code each time a call was placed to that client.

Account Codes are from one to 12 digits long. Account Codes cannot contain symbols such as (*) or (#). An example of an Account code list appears below.

Account code	Description
11127	Pat
37	Field Support
239	Liza
45	Roger
1552	Monique
53	Modern Ways Limited
100	Long distance

IMPORTANT: Remember to provide your colleagues with the Enterprise Edge Call Detail Recording Feature Codes and the Account Code list.

Using Account Codes

You can associate Account Codes with any incoming or outgoing calls. You can enter the Account Codes from any Enterprise Edge telephone by first entering the Feature Code (F9_ _).

You can enter a Account Code any time during a call. However, you cannot enter the Account Code when a call is on hold or when a configuration session is in progress.

Components of the Report Options window

Date Format

The Date Format includes the day, month and year. There are three date formats. Select one of the following:

- MM/DD/YY
- DD/MM/YY
- YY/MM/DD

The default Date Format is MM/DD/YY. This parameter affects only the Norstar Record Format. It is intended to provide market compatibility.

To assign or change the Date Format:

1. Click the **Report Options** key.
   The Report Options window opens.

2. In the **Date Format** list box, select **MM/DD/YY**, **DD/MM/YY** or **YY/MM/DD**.

Header Format

There are two kinds of Header Format. Select one of the following:

- Line/Station
- Source/Destination

The Header Format default is Line/Destination. This parameter applies to the Norstar Record Format only.

The Line/Station format always reports the line number followed by the station number. The Source/Destination format always reports the number placing the call followed by the number receiving the call. Incoming calls are reported in the Line/Station format. Outgoing calls are reported in the Station/Line format.

To assign or change the Header Format:

1. Click the **Report Options** key.
   The Report Options window opens.

2. In the **Header Format** list box, select **Line/Station** or **Source/Destination**.

DNIS Info

The Dialed Number Identification Service or DNIS provides the number the caller dialed to reach the Enterprise Edge system.

DNIS Info parameter provides two choices: enabled or disabled. The DNIS Info default is enabled. This parameter applies to the Norstar Record Format only. Not all trunks support DNIS.

To enable or disable the DNIS Info options:

1. Click the **Report Options** key.
   The Report Options window opens.

2. In the **DNIS Info** list box, select **Enable** or **Disable**.

Connect Char

Normally, Enterprise Edge Call Detail Recording reports all the digits the user dialed to connect a call. The digits can include digits responding to prompts from an Auto-attendant, extension transfer or voice mail service. To facilitate the identification of digits dialed to connect the call and digits dialed after the call is connected, an option is available to insert an "!" between them.

The Connect Char parameter provides two choices: enabled or disabled. The Connect Char default is disabled.

To enable or disable the **Connect Char** options:

1. Click the **Report Options** key.
   The Report Options window opens.

2. In the **Connect Char** list box, select **Enable** or **Disable**.

Note: Some of the Report Options parameters are market specific. If the parameter value doesn't match the trunk property, Enterprise Edge Call Detail Recording can produce incorrect reports. If you are using a Call Accounting package to process reports, consult your software vendor before you make any changes.

Components of the Market Parameters window

Market Parameters

There are seven Market Parameters. The seven Market Parameters are:

- CLID with Name
- Long CLID Support
- CLID with Call Type
- Support Call Charge
- Answer Supervision
- Call Filter Duration
- Hospitality Record

Name CLID

Enterprise Edge Call Detail Recording reports the CLID name of each call. This parameter can be enabled or disabled at any time. The name CLID default is enabled. This parameter applies to the Norstar Record Format only. Not all trunks support Name CLID.

Long CLID

Enterprise Edge Call Detail Recording supports long CLID digit reporting. The Long CLID default is disabled. This parameter is market specific. Do not change the default unless the trunk supports this feature.

Call Type

Enterprise Edge Call Detail Recording supports long distance or unknown call types. The Call Type default is enabled. This parameter applies to the Norstar Record Format only. Do not change the default unless the trunk supports this feature.

Call Charge

Enterprise Edge Call Detail Recording supports charges on calls. The Call Charge default is disabled. This parameter is market specific. Do not change the default unless the trunk supports this feature.

Answer Supervision

Enterprise Edge Call Detail Recording identifies the telephone number answering outgoing calls. The Answer Supervision default is disabled. This parameter is market specific. Do not change the default unless the trunk supports this feature.

Call Filter Duration

Enterprise Edge Call Detail Recording reports the length of all outgoing calls. The Call Filter Duration default is 2 seconds. The duration range is zero to 30 seconds.

Hospitality Record

Enterprise Edge Call Detail Recording represents four states of room occupancy: vacant, basic, mid and full. Room number lengths range from one to five digits.

Assign or Change Market Parameters

To assign or change the Market Parameters:

1. Click the **Market Parameters** key.
   The Market Parameters window opens.

2. From the **Name CLID** list box, select **Enable** or **Disable**.

3. From the **Long CLID** list box, select **Enable** or **Disable**.

4. From the **Call Type** list box, select **Enable** or **Disable**.

5. From the **Call Charge** list box, select **Enable** or **Disable**.

6. From the **Answer Supervision** list box, select **Enable** or **Disable**.

7. In the **Call Filter Duration** box, enter a number between 0 and 30.

8. In the **Hospitality Record** box, select **Enable** or **Disable**.

Caution: Some of the Report Options parameters are market specific. If the parameter value doesn't match the trunk property, Enterprise Edge Call Detail Recording can produce incorrect reports. Changing the Market Parameters can affect some Access Bin Settings or Suppress Length Settings parameters. If you are using a Call Accounting package to process reports, consult your software vendor before you make any changes.

Components of the Prefix Bin Settings window

Prefix filter

If you select the Prefix filter, you must also specify the prefix digits. The purpose of the Prefix option is to report all long distance calls, calls to certain area codes or calls to specific numbers.

If the first digits dialed match one or more of the programmable prefix strings, the call is reported, otherwise the call is not reported. You can have a maximum of eight prefix strings assigned at one time. The maximum length for each prefix string is eight digits.

Note: The defaults are 0, 1, 90, 91, 411 and 9411. A maximum of eight digits is allowed.

To assign or change a Prefix filter:

1. Click the **Prefix Bin Settings** key.
   The Prefix Bin Settings window opens.

2. In the **Prefix 1** list box, enter the prefix number.

3. In the **Prefix 2** through **Prefix 8** list boxes, enter the prefix numbers as required.

Components of the Access Bin Settings and Suppress Length Settings window

Access Bin Settings and Suppress Length Settings

Access Bin Settings codes are used to access certain long distance carriers. Personal Identification Numbers (PIN) can be associated with these codes. The long distance user dials the code of the carrier (up to five digits) followed by the PIN (0 to 16 digits), followed by the telephone number to make long distance calls. Access Bin Settings provide security to the long distance user by suppressing the printing of the PIN in the output reports.

You can have up to five codes assigned at any one time. Each code is a maximum of five digits and can be associated with a suppression number equal to the length of the PIN. The first digits dialed are compared to the Access Bin Settings. If there is a match, the next digits are suppressed. The number of digits suppressed equals the value in the suppress field for that code. Only the Access Bin Settings numbers and the remaining digits (excluding the PIN) are printed in the output report.

To enter or change the Access Bin Settings or Suppress Length Settings:

1. Click the **Access Bin Settings** key.
   The Access Bin Settings Suppress Length Settings window opens.

2. In the **Access 1** list box, enter the access code.

3. In the **Access 2** through **Access 5** list boxes, enter the access code as required.

4. In the **Suppress 1** list box, enter the Suppression Setting.

5. In the **Suppress 2** through **Suppress 5** list boxes, enter the Suppression Setting as required.

Note: Up to 16 digits can be suppressed following the Access Bin Settings.

SL-1 reports

Introduction

Use the SL-1 report when the you are supplying the output to legacy commercial accounting package or equipment. SL-1 reports are in the form of one or two lines in ASCII characters.

This section describes the SL-1 reports. It explains how to interpret the reports.

Report logs

Report logs are saved directly into the Enterprise Edge Call Detail Recording LOG directory. Use logs for call accounting processing and call activity review.

To download report logs:

1. From the Enterprise Edge Unified Manager login window, enter the user ID and password.
2. Click the **Download** button.
3. From the Call Detail Recording section, click the log file.
4. Save the log file to the designated directory.

SL-1 report types

The Enterprise Edge Call Detail Recording supports two different SL-1 report types:

- SL-1 Standard report
- SL-1 CLID report

The SL-1 CLID format is similar to the SL-1 Standard format with the addition of CLID information. For lines that do not support CLID or when no CLID information is delivered from the Enterprise Edge server, calls report in an SL-1 Standard report format.

SL-1 report field definitions

The field definitions for lines 1 and 2 SL-1 reports are summarized below:

Line 1

Column	Name	Format	Definition
1	RecType	Y	report type
2	Blank		Blank space
3-5	RecNo	XXX	report seq number
6	Blank		Blank space
7-8	CustNo	00	Customer number
9	Blank		Blank space
10-16	OrigID	TXXXXXX	Line number
		DNXXXX	STN number
		CF00001	Conference number
17	Blank		Blank space
18-24	TerID	TXXXXXX	Line number
		DNXXXX	STN number
25-37	Blank		Blank space
38-48	TimeStamp	MM/DD HH:MM	Time stamp
49	Blank		Blank space
50-57	Duration	HH:MM:SS	Call duration
58	Blank		Blank space
59-90	Digits	XXX...X	Dialed digits
50-61	AccCode	XXX...X	Account code (C report)

Line 2

Column	Name	Format	Definition
3-18	CLID	XXX...X	CLID number

SL-1 report options

Enterprise Edge Call Detail Recording generates the following SL-1 report types:

Letter code	Report option
I	Initialization report
N	Normal report
S	Start report
E	End report
A	Authorization report
C	Charge report
M	Conference Charge report

The I report contains only the report type and time stamp. The S, E, M and C reports do not contain the duration field. The E report does not contain any dialed digits.

Note: The I report does not contain Call Information number; all other report types will contain the Call Information number (if delivered).

SL-1 Standard reports

Using the field definition and report options describes above, an example of an outgoing call on line 52 that is placed by station set 7425 appears below.

```
N 027 00 DN7425  T052000             04/04 14:03 00:01:32 5551212
```

An example of an incoming call on line 47 that is answered by station set 2221 appears below.

```
N 028 00 T047000 DN2221              04/04 14:22 00:12:04
```

An example of an outgoing call on line 38 is placed by station set 7447 and transferred to station set 2221 appears below.

```
S 029 00 DN7447  T038000             04/04 15:02          8761344
E 030 00 T038000 DN2221              04/04 15:07
```

An example of a two line conference call with two outgoing calls appears below.

```
S 000 01 DN6545  T038000             04/04 12:23          9369552
E 001 01 CF0001  T038000             04/04 12:27
S 002 01 DN6789  T047000             04/04 12:23          8082635
E 003 01 CF0001  T047000             04/04 12:27
```

SL-1 CLID reports

The SL-1 CLID report consists of two lines. The CLID information, if available, is presented in the third character position of the second line.

The CLID number is always 16 digits. Any missing numbers are represented by an "x." If there is no CLID Information available then no CLID Information report is delivered.

Some examples of SL-1 CLID format reports are shown below:

An incoming call on line 38 is answered by station set 2221 with CLID enabled and the CLID number available is 4032919000.

```
N 034 00 T038000 DN2221              04/04 15:32 00:10:24
  4032919000xxxxxx
```

An incoming call on line 37 is answered by station set 2211 with Call Information enabled, and the CLID number is not available.

```
N 035 00 T037000 DN2211              04/04 14:22 00:12:04
```

Note: The report is the same as the SL-1 Standard report.

An incoming call on line 38 is answered by station set 7447 and transferred to station set 2223. Call Information is enabled and the Call Information number available is 4032919001 as shown below.

```
S 029 00 T038000 DN7447              04/04 15:02
  4032919001xxxxxx
E 030 00 T038000 DN2223              04/04 15:07
  4032919001xxxxxx
```

SL-1 Target line / Physical lines

When target lines are used on digital trunks, reports show both the target line number and the physical line number.

An example of an incoming call on target line 103 appears below. The physical line is 37 and is transferred to another station set.

```
S 029 00 T037103 DN7499              04/04  15:02
E 030 00 T037103 DN7370              04/04  15:07
```

Special station set numbers

Two special station set numbers are reserved by Enterprise Edge Call Detail Recording to represent special entities in the Enterprise Edge server that can answer calls. It is important to know these special entities to interpret the reports correctly.

The following are the known station set entities defined:

- Auto Attendant
- Remote Pager

When the Auto Attendant answers incoming calls, the station set number reports as 0 (zero). When an incoming call is answered by Remote Pager, the station set number reports as 7.

Norstar reports

Introduction

Use Norstar reports when the you assign the Enterprise Edge Call Detail Recording output to a printer or Call Accounting package designed to use the Norstar report.

This section describes the Norstar report. It explains how to interpret the reports.

Norstar report types

The Enterprise Edge Call Detail Recording supports four different Norstar report types:

- Standard report
- CLID report
- Real Time report
- All report

Norstar Standard reports

Norstar Standard reports always start with a header line indicating the date (MM/DD/YY) time (HH/MM/SS), LINE field and STN field. The reports have at least one event line showing an event and time stamp.

An example of an Outgoing call in Standard format appears below.

```
--------   04/04/99   11:39:43   LINE = 0003   STN = 7425
00:00:00   OUTGOING CALL
           DIGITS DIALED    5551212
00:00:37   ACCOUNT CODE     87
00:12:59   CALL RELEASED
```

An example of an Incoming Call in Standard format appears below.

```
--------   04/04/99   12:00:01   LINE = 0083   STN = 7726
00:00:00   INCOMING CALL    RINGING 0:32
00:00:39   HOLD
00:01:12   UNHOLD
00:02:47   CALL RELEASED
```

Norstar Call Information reports

When you select this option, CLID information received from the Enterprise Edge server for an incoming call prints between the report header and the event lines. There is one occurrence of CLID information per call. If no CLID information is received, no CLID field appears in the report.

If you need Slave CLID information, you must configure the Master Enterprise Edge Call Detail Recording to receive CLID information. You must configure The Master Enterprise Edge Call Detail Recording to print SL-1 CLID report format or Norstar CLID report format.

Note: Enterprise Edge Call Detail Recording reports CLID information only for lines that are capable of delivering CLID. You must configure the Enterprise Edge server to enable delivering CLID information.

Call Information report field definitions

The first Call Information line after the header line is the CALLING NUMBER:

- maximum of 11 characters
- if the number is truncated, the 11 digits received are preceded by "/"
- if only partial CLID number was received, the digits are followed by an "x"
- UNKNOWN (if no data is received in the number field)

The second Call Information line is the NAME:

- Name (maximum 15 characters)
- UNKNOWN (if no name is received in the name field)

The third Call Information line is the call type indicating if the call is a long distance call or otherwise:

- LONG DISTANCE
- UNKNOWN (if no call type information is received)

An example of an incoming call in the CLID format appears below.

```
--------   04/04/99   11:12:01   LINE = 0013   STN = 7465
           CALLING NUMBER   4032919123
           NAME             UNKNOWN
           UNKNOWN
           BC = SPEECH
00:00:00   INCOMING CALL    RINGING 0:32
00:00:39   HOLD
00:01:12   UNHOLD
00:02:47   CALL RELEASED
```

An example of an abandoned (no answer) incoming call in CLID format appears below.

```
--------   04/04/99   20:30:00   LINE = 0035
           CALLING NUMBER   4032919123
           NAME             UNKNOWN
           UNKNOWN
           BC = SPEECH
00:00:00   NO ANSWER        RINGING 3:15
```

An example of a call report with CLID number truncated appears below.

```
--------   04/04/99   11:12:01   LINE = 0013   STN = 7465
           CALLING NUMBER   /12345678901
           NAME             UNKNOWN
           UNKNOWN
           BC = SPEECH
00:00:00   INCOMING CALL    RINGING 0:32
00:00:39   HOLD
00:01:12   UNHOLD
00:02:47   CALL RELEASED
```

An example of a call report with only partial CLID number appears below.

```
--------   04/04/99   11:12:01   LINE = 0013   STN = 7465
           CALLING NUMBER   1234567890x
           NAME             UNKNOWN
           UNKNOWN
           BC = SPEECH
00:00:00   INCOMING CALL    RINGING 0:32
00:00:39   HOLD
00:01:12   UNHOLD
00:02:47   CALL RELEASED
```

Norstar Real Time report format

Real Time call records are one line long. All Real Time records begin with an asterisk (*) to differentiate them from non-Real Time call records. Real Time records are generated only when CLID Information is available. Records are generated only for the following five call states and four Hospitality record types:

- Ringing is represented by the letter “G”
- Dialed Number Identification Service (DNIS) is represented by the letter “D”
- Answered is represented by the letter “A”
- No Answer is represented by the letter “N”
- Transfer is represented by the letter “T”
- Released is represented by the letter “R”
- Hospitality vacant is represented by the letters “H V”
- Hospitality basic is represented by the letters “H B”
- Hospitality mid is represented by the letters “H M”
- Hospitality full is represented by the letters “H F”

The RINGING call state is unique to Real Time records because it indicates a ringing line as soon as Enterprise Edge Call Detail Recording received the CLID Information.

The Dialed Number Identification Service (DNIS) record is reported only if the line delivers the DNIS information. If present, it follows right after the RINGING record.

An example of a call, ringing with DNIS, answered and released appears below.

```
*030198 154615 0019           6137635114     John Doe        U G
*030198 154615 0019           6137635114     4037352000      U D
*030198 154623 0019    7832   6137635114     John Doe        U A
*030198 154831 0019    7832   6137635114     John Doe        U R
```

An example of a transferred call appears below.

```
*041197 094105 0003           2919000        Alan Smith      U G
*041197 094105 0003           2919000        7305432         U D
*041197 094111 0003    7344   2919000        Alan Smith      U A
*041197 094156 0003    7440   2919000        Alan Smith      U T
*041197 094414 0003    7440   2919000        Alan Smith      U R
```

Real time records are printed when the events occur. The record information can be used to drive external PC database applications. One such application is to locate customer information stored in the database by extracting the CLID information from the Real time records.

Norstar All report format

When this option is selected, Standard, CLID Information and Real Time records are provided.

An example of a call record when **All** is selected appears below. The RINGING records show the time when the call is received with CLID Information, not the time when it started alerting. The call is answered 15 seconds after the ringing began. It is transferred 25 seconds after it is answered and is released two minutes after it was transferred.

```
*030298 154920 0022            4032919000     UNKNOWN       D G

*030298 154920 0022            4032919000     8002349876    D D

*030298 154935 0022    7101    4032919000     UNKNOWN       D A

*030298 155000 0022    7169    4032919000     UNKNOWN       D T

*030298 155200 0022    7169    4032919000     UNKNOWN       D R

--------   03/02/98   15:49:20   LINE = 0022   STN = 7101
           CALLING NUMBER   4032919000
           NAME             UNKNOWN
           LONG DISTANCE
           DNIS NUMBER      8002349876
           BC = SPEECH
00:00:00   INCOMING CALL    RINGING 0:15
00:00:20   HOLD
00:00:25   TRANSFERRED

--------   03/02/98   15:50:00   LINE = 0022   STN = 7169
00:00:00   FROM TRANSFER
00:00:00   UNHOLD
00:02:00   CALL RELEASED
```

Special station set numbers

Two special station set numbers are reserved by Enterprise Edge Call Detail Recording to represent special entities in the Enterprise Edge server that can answer calls. It is important to know these special entities to interpret the reports correctly.

The following are the known station set entities defined:

- Auto Attendant
- Remote Pager

When the Auto Attendant answers incoming calls, the station set number reports as 0 (zero). When an incoming call is answered by Remote Pager, the station set number reports as 7.

Standard Hospitality record format

This Hospitality record represents four states of room occupancy: vacant, basic, mid and full. Room number lengths range from one to five digits.

An example of a Standard Hospitality record showing room 12345 status set to vacant appears below.

```
--------   23/01/98   23:49:00   STN = 12345
           HOSPITALITY VACANT
```

An example of a Standard Hospitality record showing room 7324 status set to vacant appears below.

```
--------   23/01/98   23:49:00   STN = 7324
           HOSPITALITY VACANT
```

An example of a Standard Hospitality record showing room 732 status set to basic appears below.

```
--------   23/01/98   23:49:00   STN = 732
           HOSPITALITY BASIC
```

An example of a Standard Hospitality record showing room 73 status set to mid appears below.

```
--------   23/01/98   23:49:00   STN = 73
           HOSPITALITY MID
```

An example of a Standard Hospitality record showing room 7 status set to full appears below.

```
--------   23/01/98   23:49:00   STN = 7
           HOSPITALITY FULL
```

Target line / Physical lines

When target lines are being used on digital trunks, the Enterprise Edge Call Detail Recording reports show both the target line and the physical line number.

An example of an Incoming call on a target line appears below. The target line number is 101 and the physical line number is 38. The call is answered by station set 7468.

```
--------   12/12/97   12:00:01   LINE = 0101   STN = 7468
00:00:00   INCOMING CALL
           LINE = 0038
00:28:33   CALL RELEASED
```

Busy reports

There are two Enterprise Edge Call Detail Recording busy reports:

- Direct Inward Dial
- Target Line

Direct Inward Dial (DID) busy

This happens when a digital line is set up as a DID line requiring receive digits to route the call through the Enterprise Edge server via a target line. If all target line destinations are busy, and the Enterprise Edge server is programmed to return busy instead of routing the call to the prime station set, Enterprise Edge Call Detail Recording reports busy.

```
--------   03/02/99   15:09:32   LINE = 0235
00:00:00   BUSY
           LINE = 0035
```

Target line busy

This happens when a target line is involved with a call, and a second incoming call tries to use the same line. Enterprise Edge Call Detail Recording reports busy, but does not include the target line information.

```
--------   03/02/99   14:36:02   LINE = 0035
00:00:00   BUSY
```

Enterprise Edge Call Detail Recording reports busy only if the Enterprise Edge server is programmed to provide busy treatment.

Bearer capability data

When you set Enterprise Edge Call Detail Recording to report in Norstar CLID format, Enterprise Edge Call Detail Recording supports the reporting of Bearer capability associated with the call as part of the CLID report. An example of an incoming call with Bearer capability data appears below.

```
--------   12/03/99   14:36:00   LINE = 0035
           CALLING NUMBER   7355303
           NAME             UNKNOWN
           UNKNOWN
           BC = SPEECH
00:00:00   NO ANSWER        RINGING  0:02
```

Note: This is supported only if the Enterprise Edge server supports Bearer capabilities.

PRI Call-by-call service

When the ISDN Primary Rate Interface (PRI) trunks is installed in the Enterprise Edge server, the Enterprise Edge Call Detail Recording supports the reporting of PRI Call-by-call service as part of the CLID call records in Norstar CLID format. Both the service type and service ID for incoming and outgoing calls are reported in the records. The following example illustrates an incoming call using the TIE service with service ID 0 and the corresponding outgoing call using the PUBLIC service.

```
--------   01/01/98   01:38:00   LINE = 0001   STN = 221
           CALLING NUMBER   6135551212
           NAME             UNKNOWN
           UNKNOWN
           DNIS NUMBER      9772210
           BC = SPEECH
           PRI SERVICE      TIE 0
00:00:00   INCOMING CALL    RINGING 0:00
00:01:35   CALL RELEASED

--------   01/01/98   01:38:00   LINE = 0023   STN = 223
           BC = SPEECH
           PRI SERVICE      PUBLIC
00:00:00   OUTGOING CALL
           DIGITS DIALED    9772210
00:01:35   CALL RELEASED
```

Note: This is supported only if the necessary Enterprise Edge hardware is installed and the PRI trunks are configured properly to deliver PRI call-by-call service information.

Voice Over IP Calls

Calls, both incoming and outgoing, that use the Voice Over IP protocol are included in the CLID report. An example of an incoming call using Voice Over IP appears below:.

```
--------   12/03/99   14:36:00   LINE = 0035
           CALLING NUMBER   7355303
           NAME             UNKNOWN
           UNKNOWN
           BC = SPEECH
           VOIP CALL
00:00:00   NO ANSWER        RINGING  0:02
```

Dialed number identification service

Certain trunk types support the delivery of Dialed Number Identification Service (DNIS). Enterprise Edge Call Detail Recording supports the reporting of DNIS as part of the CLID call reports when the information is delivered. DNIS reporting is supported in both Norstar CLID format and Norstar Real Time format. An example of an incoming call with DNIS information appears below

```
--------   01/01/99   01:38:00   LINE = 0001   STN = 221
           CALLING NUMBER   6135551212
           NAME             UNKNOWN
           UNKNOWN
           DNIS NUMBER      9772210
           BC = SPEECH
           PRI SERVICE      TIE 0
00:00:00   INCOMING CALL    RINGING 0:00
00:01:35   CALL RELEASED
```

Note: This is supported only if the necessary Enterprise Edge hardware is installed and the trunks supporting DNIS are configured properly to deliver DNIS information.

Call connected digit separator

Normally, Enterprise Edge Call Detail Recording reports all the digits the user dials to connect the call. The digits can include digits responding to prompts from the Automated Attendants, extension transfer or voice mail service. To facilitate the identification of digits dialed to connect the call and digits dialed after the call is connected, an option is available to insert an "!" between them. An example of an outgoing call with call connected digit separator appears below

```
--------   01/01/99   01:38:00   LINE = 0023   STN = 223
           BC = SPEECH
00:00:00   OUTGOING CALL
           DIGITS DIALED    9772210!0132
00:01:35   CALL RELEASED
```

Note: Enterprise Edge Call Detail Recording cannot differentiate between required digits to connect the call and extra digits dialed before the call is connected. Not all Enterprise Edge servers support the delivery of call connected signal and this feature can not be available for some Enterprise Edge servers.

External call forward

This happens when an extension is configured to externally forward calls in three different situations: Call Forward All Calls (CFAC), Call Forward Busy (CFB) and Call Forward No Answer (CFNA). When an incoming call is unanswered and externally forwarded, Enterprise Edge Call Detail Recording reports the call as outgoing. Enterprise Edge Call Detail Recording reports the incoming line or extension, the outgoing line, the extension responsible for the external call forward, the reason for the external call forward and the digits dialled.

Note: For more information, refer to the Installation and Maintenance Guide that came with your system.

An example of an Incoming Call on line 0001 being externally forwarded to line 0002 appears below. Extension 221 is responsible for the external call forward event.

```
--------   12/31/99   11:59:59   LINE = 0001   LINE = 0002
           CALLING NUMBER   4032919123
           BC = SPEECH
           EXT CALL FWD          STN  =  221   REASON  = CFAC
00:00:00   OUTGOING CALL
           DIGITS DIALED   5551212
00:02:47   CALL RELEASED
```

An example of an internal call being externally forwarded to line 0002 appears below. Extension 222 originated the call. Extension 221 is responsible for the external call forward event.

```
--------   12/31/99   11:59:59   STN  =  222   LINE = 0002
           CALLING NUMBER   4032919123
           BC = SPEECH
           EXT CALL FWD          STN  =  221   REASON  = CFAC
00:00:00   OUTGOING CALL
           DIGITS DIALED   5551212
00:02:47   CALL RELEASED
```

Norstar report field definitions

The following list shows all of the lines that can be printed by Enterprise Edge Call Detail Recording in the Norstar report.

Standard and CLID report formats

```
        0        1         2         3         4         5         6         7
        12345678901234567890123456789012345678901234567890123456789012345678901234567890

        --------   MM/DD/YY   HH:MM:SS   LINE = XXXX   STN = XXXXXXX
        --------   MM/DD/YY   HH:MM:SS   LINE = XXXX   LINE = XXXX
        --------   MM/DD/YY   HH:MM:SS   LINE = XXXX
        --------   MM/DD/DY   HH:MM:SS
                   RECORD RESTART
        00:00:00   INCOMING CALL    RINGING 0:00
        00:00:00   OUTGOING CALL
        00:00:00   NO ANSWER        RINGING 0:00
        00:00:00   FROM TRANSFER
        00:00:00   INVALID PASSWORD
        00:00:00   HOLD
        00:00:00   UNHOLD
        00:00:00   ACCOUNT CODE     123
        00:00:00   BUSY
                   DIGITS DIALED    9369552
        00:00:00   CONFERENCE       STN2 = 7425
        00:00:00   CONFERENCE       LINE2 = 0052
        00:00:00   CONFERENCE END
        00:00:00   RESTRICTI0N PASSWORD 99
        00:00:00   CALL RELEASED
        00:00:00   TRANSFERRED
        00:00:00   FROM TRANSFER
                   RECORDS LOST
                   LINE = 0015
                   BC = SPEECH
                   BC = UNRESTRICTED DIGITAL
                   BC = RESTRICTED DIGITAL
                   BC = 3.1 kHZ AUDIO
                   BC = 7 kHZ AUDIO
                   BC = VIDEO
                   CALLING NUMBER   4032919123
                   CALLING NUMBER   /12345678901
                   CALLING NUMBER   4032919123x
                   NAME             Peter Pan
                   LONG DISTANCE
                   UNKNOWN
                   DNIS NUMBER      4032652300
                   PRI SERVICE      PUBLIC
                   PRI SERVICE      PRIVATE
                   PRI SERVICE      TIE
                   PRI SERVICE      FX
                   PRI SERVICE      OUTWATS
                   PRI SERVICE      SWITCHED DIGITAL
                   PRI SERVICE      INWATS
                   PRI SERVICE      INTL INWATS
                   PRI SERVICE      900
                   HOSPITALITY VACANT
                   HOSPITALITY BASIC
                   HOSPITALITY MID
                   HOSPITALITY FULL
                   EXT CALL FWD          STN  =  4221  REASON  = CFAC
                   EXT CALL FWD          STN  =  4222  REASON  = CFB
                   EXT CALL FWD          STN  =  4227  REASON  = CFNA
                   VOIP CALL
```

Real Time record format

```
0        1         2         3         4         5         6         7
12345678901234567890123456789012345678901234567890123456789012345678901234567890
*MMDDYY HHMMSS LINE  STATION   CLID NUMBER      NAME/DNIS    TYPE EVENT
*030193 154615 0019            6137635122       Alan Smith      U G
*030193 154615 0019            6137635122       4032632300      U D
*030193 154615 0019    7343    6137635122       Alan Smith      U A
*030193 154615 0019    7343    6137635114       Alan Smith      U N
*030193 154615 0019    7343    6137635122       Alan Smith      U T
*030193 154615 0019    7343    6137635114       Alan Smith      U R
*012398 234900         12345                                    H V
*012398 234900         12345                                    H B
*012398 234900         12345                                    H M
*012398 234900         12345                                    H F
```

Norstar Standard and CLID report description

For non-Real time Standard and CLID reports, each line has a maximum of three fields (except for the header line).

The header line has a maximum of five fields:

- the first field is always eight dashes
- the second field is the date the call originated
- the third field is the time the call originated
- the fourth field is the line being used
- the fifth field is either the line or station using the line in the fourth field

Enterprise Edge Call Detail Recording reports calls based on events (change of call states). The first field is the time the associated event occurred. The time is an offset from the start time of the call indicated in the header. The second field describes the event associated with that call. Events can be either a call state like hold or transfer, or a user action like account code entry. The third field is data that further describes the action indicated in the second field.

Printable line descriptions

The line below is the header line indicating the start of a call report, or the continuation of a call report after a transfer. This report can have three, four or five fields. The date and time reflect the date and time the call started. For incoming calls, this is when the call is answered. For outgoing calls it is the time the line is seized. The LINE field is fixed at four digits. The STN directory number (DN) can be from two to seven digits in length. For Outgoing tandem calls, both the fourth and the fifth field are LINE.

```
--------   MM/DD/YY   HH:MM:SS   LINE = XXXX   STN = XXXXXX
```

The line below prints after the header line when Enterprise Edge Call Detail Recording or the Enterprise Edge server re-starts.

```
                RECORD RESTART
```

The line below prints after the header line (with all five fields) or after the CLID Information. The time in the header line shows when the call is answered. This time minus the ringing duration (the third field) is when the call starts ringing.

```
00:00:00   INCOMING CALL    RINGING 0:04
```

The line below prints after the header line (with all five fields). The time in the header line field indicates when the call is initiated.

```
00:00:00   OUTGOING CALL
```

The line below prints after the header line when an incoming call is unanswered.

```
00:00:00   NO ANSWER        RINGING 0:22
```

The line below prints when an incoming call receives busy treatment.

```
00:00:00   BUSY
```

The lines below print when the call is put on hold or taken off hold.

```
00:00:04   HOLD
00:00:06   UNHOLD
```

The lines below print at the start and the end of a conference. The third party in the conference can be a second station set or a second line as indicated in the third field.

```
00:10:32   CONFERENCE       STN2 = 7425
00:12:12   CONFERENCE       LINE2 = 0052
00:12:45   CONFERENCE END
```

The line below prints when a call is transferred.

```
00:00:00   TRANSFERRED
```

The line below prints after the header line when a call was transferred. It indicates the start of the call at the new station set that received the transfer.

```
00:00:00   FROM TRANSFER
```

The line below prints after the last state of a call. It is followed by a carriage return and two line feeds so that there is a blank line before the start of the next call report.

```
00:00:00   CALL RELEASED
```

The line below prints when digits dialed appear in Outgoing call reports. A maximum of 32 digits/characters can appear. If the call connected digit separator option is enabled, an "!" appears between digits dialed before and after the call connects.

```
               DIGITS DIALED   XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
               DIGITS DIALED   123456789!1234
```

The line below prints when the user or caller enters an invalid password.

```
00:00:00   INVALID PASSWORD
```

The line below prints when an account code is entered. Account codes can be a maximum of 12 digits.

```
00:00:00   ACCOUNT CODE     XXXXXXXXXXXX
```

The line below prints when a password is entered. The password ID is a maximum of two digits (00-99). The report indicates the password override ID and not the password itself.

```
00:00:00   RESTRICTION PASSWORD XX
```

The line below prints as the last line of a call report if the call states are missed or if a call is missed altogether. It is followed by a carriage return and two line feeds so that there is a blank line before the start of the next call report.

```
               REPORTS LOST
```

The line below prints identifying the physical line of an incoming call on a target line. The line number is fixed at four digits (with leading zeros).

```
                LINE = XXXX
```

The lines below print when CLID information is available. The calling number shown can be a maximum of 12 characters of which a maximum of eleven can be digits. If a number received by the Enterprise Edge server is longer than eleven digits, then a "/" is the first character, followed by the eleven least significant digits. The name can be a maximum of 15 characters. Each of the number and name can show "UNKNOWN". The third line is the call type. It shows either "LONG DISTANCE" or "UNKNOWN" if call type information is not available. The DNIS number, if available, appears after the call type. It is followed by the Bearer Capability. The last line is the PRI Call-by-call service. It appears only if the PRI service information is available.:

```
CALLING NUMBER   XXXXXXXXXXX
NAME             XXXXXXXXXXXXXXX
UNKNOWN
DNIS NUMBER      XXXXXXXXXX
BC = SPEECH
PRI SERVICE      TIE XXXXX
VOIP CALL
```

The lines below are printed when the room occupancy status of room 12345 changes to vacant.

```
--------   23/01/98   23:49:00   STN = 12345
           HOSPITALITY VACANT
```

The line below is printed when a call is externally forwarded. Extension 221 is responsible for the external call forward event.

```
EXT CALL FWD          STN  =  221   REASON  = CFAC
```

Norstar Real Time record description

The Real Time record is one line long beginning with an asterisk (*) to differentiate it from other Norstar records. This record contains eight fields:

- Date in MMDDYY format
- Time in HHMMSS format
- Line number associated with the call
- Station Set number associated with the call
- CLID number
- CLID name or DNIS number
- Call type
- Call state

The first field is the date field and is a fixed length of six digits (MMDDYY). The month, day or year are preceded with a leading 0 to keep the field length fixed. For example, 010501 is January 5, 2001.

The second field is the time which is also a fixed field with six digits (HHMMSS). There are no separators between hour, minute and second.

The third field is the line which is associated with the call being tracked. The line is fixed at four digits and can have leading zeros. For example, 0019 is line 19. Because the Real Time Hospitality record does not use the third field it does not contain any characters and appears blank.

The fourth field is the station set number of the station set associated with the call. Station Set numbers can be from two to seven digits long. If the number is less than seven digits there are no leading zeros because this field is not fixed. In the Real Time Hospitality record the fourth field shows the room number. Room numbers are one to five digits long.

The fifth field is the CLID Information field indicating the calling number. The number can be a maximum of 12 characters (11 digits maximum and the “/” and “x” character). There is always information in this field. If no number is available, either UNKNOWN or PRIVATE appears in this field. Because the Real Time Hospitality record does not use the fifth field it does not contain any characters and appears blank.

The sixth field is the CLID name or DNIS information. The name can have a maximum of 15 characters. If no name is available, UNKNOWN appears in this field. This field is replaced by the DNIS information in “D” records. The DNIS can have a maximum of 10 digits. In the Real Time Hospitality record the sixth field shows the room occupancy status indicator.

The seventh field is the CLID call type which is either long distance (D) or unknown (U).

The eight field indicates the call state of the Real Time record. This field always contains a call state indicator and is followed immediately by a carriage return and two line feeds.

Real Time Hospitality record format

This Hospitality record represents four states of room occupancy: vacant, basic, mid and full. Room number lengths range from one to five digits.

An example of a Real Time Hospitality record showing room 12345 status set to vacant appears below.

```
*012398 234900        12345                                   H V
```

An example of a Real Time Hospitality record showing room 7324 status set to vacant appears below.

```
*012398 234900        7324                                    H V
```

An example of a Real Time Hospitality record showing room 732 status set to basic appears below.

```
*012398 234900        732                                     H B
```

An example of a Real Time Hospitality record showing room 73 status set to mid appears below.

```
*012398 234900        73                                      H M
```

An example of a Real Time Hospitality record showing room 7 status set to full appears below.

```
*012398 234900        7                                       H F
```

Install CDRClient Application

To install the CDRClient application:

1. Exit any Windows® programs that are running.

2. Disable any anti-virus programs that are running.

3. On the taskbar, click the **Start** button, point to **Find** and then click **Computer**.
   The Find: Computer dialog box appears.

4. In the **Named** list box, type the name of the Enterprise Edge server or select the Enterprise Edge server from the list. If you do not know the name, ask your System Administrator.

5. Click the **Find Now** button.
   The Enterprise Edge server icon appears in the list below.

6. Double-click the **Enterprise Edge server** icon.
   The Enterprise Edge server window opens.

7. Double-click the **NortelDT** folder.

8. Double-click **CDRClient.exe** to expand the file to C:\\Windows\Temp directory.

9. From the C:\\Windows\Temp directory, execute **Setup.exe**.
   When completed CDRClient appears under the Start menu.

10. Follow the instructions on the display to complete the installation.

Call Detail Recording Display

The CDRClient allows you to remotely monitor records as calls occur. To access CDRClient:

1. Click the **Start** button, point to **Programs.**

2. Point to **Nortel Networks** and click **CDRClient**.
   The CDRClient window appears.

The CDRClient window

Using CDRClient you can view and print records.

To use CDRClient:

1. Type the server name in the Server box to connect to the Enterprise Edge server.

2. Click the **Set Server** button to apply the name.

3. Click the **Start** button to view call activity records.

Note: If you do not know the server name, see your System Administrator. When you do not enter a server name the connection automatically goes to the local server.

The CDRClient maintains a limited number of records. New records replace old records after the buffer is full.

4. Click the **Stop** button to stop viewing call activity records.

To print records as you view them:

1. Select the record you want to print or right click on the mouse to Select All.

2. Click the **COPY** button or right click on the mouse to copy the record to the clipboard.

3. **Paste** the record into a text application such as WordPad or Notepad.

4. Print the record.

Note: All records are maintained on the Enterprise Edge server. Use Enterprise Edge Unified Manager to obtain records and print files.

Call Record Security

Enterprise Edge Call Detail Recording Record Security

The records from Enterprise Edge Call Detail Recording are sensitive in nature. Communication among top executives and external companies, telephone banking passwords, long distant PIN codes, etc. are some of the examples that require protection from unauthorized access. With the introduction of network real time access in Enterprise Edge Call Detail Recording, the System Administrator must setup the system to protect against unauthorized access.

The default installation of Enterprise Edge Call Detail Recording enables the <Everyone> group to have launch permission to the records. This means anyone in the same NT domain has access to the Enterprise Edge Call Detail Recording records. The intention of this configuration is to provide an environment for the System Administrator to test and verify the installation is performed properly. This configuration, however, does not offer protection against unauthorized access. The exposure to unauthorized access increases if the server has the Guest account enabled. In this scenario, all users in different domains within the intranet can have access to the records.

To guard against unauthorized access to Enterprise Edge Call Detail Recording records, after the System Administrator has successfully verified the remote connection, you must:

1. Remove the <Everyone> group from the launch permission list.

2. Add only the authorized users in the launch permission list.

In this configuration, the NT security will protect the CDR records against unauthorized access.

Network Configuration

In general, Windows NT® networking is configured as a server-based network or as a peer-to-peer network. In a server-based network, one or more domain servers provide support for managing network logon and security. In a peer-to-peer network, there is no central domain servers. Each computer can act as both a client and a server.

The following discussion assumes the Enterprise Edge server is installed in a server-based networks and it is registered as a member server in the domain.

Configure CDR Server Launch Permission

A batch utility file is provided in the Enterprise Edge Call Detail Recording program directory to allow the System Administrator to administer the launch permission remotely. This utility, CDRUser.bat, is installed in the program directory. The System Administrator can access this the utility in a telnet session.

Telnet to the Enterprise Edge Server

The System Administrator can connect to the remote server using the telnet protocol. To connect to the remote server:

1. In a command prompt window enter **C:\> telnet <Server name>**.

2. Enter the System Administrator **user id and password**.

Change to the Program directory

When you are connected to the server, change to the program directory **C:\> cd "Program Files\Nortel Networks\Call Detail Recording"**. The batch utility file, CDRUser.bat, is located in this directory.

CDRUser command line syntax

The command line syntax for CDRUser is as follows:

CDRUser list (list all users in the launch permission list)

CDRUSER set <domain\user> permit (permit <domain\user> with right to launch in the launch permission list)

CDRUser set <domain\user> deny (deny <domain\user> the right to launch in the launch permission list)

CDRUser remove <domain\user> (remove <domain\user> in the launch permission list)

List current users in the launch permission list

To list current users in the launch permission list of CDRServer, use the following command:

CDRUser list

This command lists all the users in the CDRServer launch permission list.

Add new users to the launch permission list

To add a new user to the launch permission list of CDRServer, use the following command:

CDRUser set <domain\user> permit

The user can be a group name or a single user ID.

Permit gives the user the right to launch the CDRServer.

Deny disallows the user to launch the CDRServer. The user can be a group name or a user id. This is useful when the majority of a group is allowed access except a few members in the group. For example, to allow all users in the Accounting group to have access except user johndoe, you will enter the following:

CDRUser set mydomain\Accounting permit.

CDRUser set mydomain\johndoe deny.

The first command allows everyone in the accounting group to have launch permission. The second command denies johndoe to access even though he is a member of the Accounting group. These two commands combine to allow everyone in the accounting group except johndoe to have launch permission to the CDRServer.

If the <Everyone> group is permitted in the launch permission list (the default), all users in the domain can launch the CDRServer.

If the Guest account in the Enterprise Edge server is enabled, all users within the intranet can launch the CDRServer.

IMPORTANT: After the Enterprise Edge Call Detail Recording installation is completed and confirmed to be working properly, it is recommended to remove the <Everyone> group from the launch permission list. Add only the groups/users in the domain that need access to the data.

Delete a user in the launch permission list

To remove a user from the launch permission list, use the following command:

CDRUser remove <domain\user>.

The user can be a group name or a single user ID. This command remove the user from the launch permission list.

To remove the Everyone group from the permission list, use the following command:

CDRUser remove Everyone.

To permit johndoe in the Accounting group in previous example to launch CDRServer, use the following command:

CDRUser remove mydomain\johndoe.

As johndoe is removed from the deny access list, he is no longer denied access to the CDRServer.

Sample launch permission administration session

```
C:\>telnet myserver
Micorsoft ®, Windows NT ™ Version 4.00 (Build 1381)
Welcome to Microsoft Telnet Service
Telnet Server Build 5.00.99034.1
Login: EE_Admin
Password: ******
*===============================================================*
   Nortel Networks                              Enterprise Edge 1000
*===============================================================*
C:\>cd "Program Files\Nortel Networks\Call Detail Recording"

C:\PROGRA~1\Nortel Networks\Call Detail Recording>cdruser list

C:\PROGRA~1\Nortel Networks\Call Detail Recording>dcomperm -al
{CF6B518A-5214-11 D3-8A85-000000000000}list
Launch permission list for AppID {CF6B518A-5214-11D3-8A85-000000000000}:

Access permitted to NT AUTHORITY\SYSTEM.
Access permitted to NT AUTHORITY\INTERACTIVE.
Access permitted to BUILTIN\Administrators.
Access permitted to \Everyone.

C:\PROGRA~1\Nortel Networks\Call Detail Recording>CDRUser remove Everyone

C:\PROGRA~1\Nortel Networks\Call Detail Recording>dcomperm -al
{CF6B518A-5214-11 D3-8A85-000000000000} remove Everyone

C:\PROGRA~1\Nortel Networks\Call Detail Recording>CDRUser list

C:\PROGRA~1\Nortel Networks\Call Detail Recording>dcomperm -al
{CF6B518A-5214-11 D3-8A85-000000000000} list
Launch permission list for AppID {CF6B518A-5214-11D3-8A85-000000000000}:

Access permitted to NT AUTHORITY\SYSTEM.
Access permitted to NT AUTHORITY\INTERACTIVE.
Access permitted to BUILTIN\Administrators.

C:\PROGRA~1\Nortel Networks\Call Detail Recording>CDRUser set everyone permit

C:\PROGRA~1\Nortel Networks\Call Detail Recording>dcomperm -al
{CF6B518A-5214-11 D3-8A85-000000000000} set everyone permit

C:\PROGRA~1\Nortel Networks\Call Detail Recording>cdruser list

C:\PROGRA~1\Nortel Networks\Call Detail Recording>dcomperm -al
{CF6B518A-5214-11 D3-8A85-000000000000} list
Launch permission list for AppID {CF6B518A-5214-11D3-8A85-000000000000}:

Access permitted to NT AUTHORITY\SYSTEM.
Access permitted to NT AUTHORITY\INTERACTIVE.
Access permitted to BUILTIN\Administrators.
Access permitted to \Everyone.
```

Peer-to-peer networks

The above sample uses a domain server network as an example for the launch permission administration. In addition, the Enterprise Edge server must be registered as a member server of the domain.

For a peer-to-peer network, the configuration is slightly different. In this case, the Enterprise Edge server is not registered as a member server in the network.

Since there is no domain server to authenticate the user id and password, the domain name in the domain\user pair is not required.

No domain server to authenticate the users implies the group/user accounts must be created in the Enterprise Edge server before the CDRServer launch permission administration. The Enterprise Edge server has to take on the responsibility to verify if the users have the right launch permission.

If the remote PC is a Windows NT® workstation, ensure the user accounts in the launch permission list exist on both the server and the client PC with matching passwords. When the user login to the remote PC using one of the authorized user account, the user has the launch permission to the Enterprise Edge CDRServer.

The situation gets complicated if the remote PC is a member of a domain and has login to the domain already. The domain passwords of the users in the launch permission list must be the same as the passwords in the corresponding Enterprise Edge server user accounts.

The System Administrator must take the responsibility for configuring the system with adequate security according to the unique nature of the network.

Glossary

Account feature code

A three-digit number that enables users to enter an Enterprise Edge Call Detail Recording account code from a two-line display telephone.

Baud

A variable unit of data transmission speed equal to one bit per second.

Call Accounting

An optional software program used to analyze the data collected by Enterprise Edge Call Detail Recording and to organize it according to a company's needs.

Call report

A type of report created by Enterprise Edge Call Detail Recording. This report includes information about a call's duration and number dialed. Call report information is collected to itemize telephone activity.

CLASS

Custom Local Area Signalling Services is a collection of services from the local telephone company.

CLID

When available from the local telephone company, Calling Line Identification shows the calling number on the telephone display.

CMS

Call Management Services is a collection of services from the local telephone company. CMS is a part of CLASS.

Default

A value that Enterprise Edge Call Detail Recording assumes unless another one is specified.

External Call Forward

An Enterprise Edge telephone is configured to forward calls to destinations external to the Enterprise Edge server using outgoing lines.

ISDN

Integrated Services Digital Network is a worldwide digital communications network.

Norstar report format

An English language syntax organization of call reports.

Enterprise Edge Call Detail Recording

Enterprise Edge Call Detail Recording is an application on your Enterprise Edge Call Detail Recording used to record call activity.

Enterprise Edge server

The central hardware component in the Enterprise Edge system. This server has its own processor and memory, and provides a physical point for connection of various types of data terminals, telephones and expansion modules.

Hospital Record

A type of record created by Enterprise Edge Call Detail Recording that provides the room occupancy status whether vacant, basic, mid or full.

Physical line

The physical connection between the Enterprise Edge system and the outside world.

SL-1 report format

The organization of information that Enterprise Edge Call Detail Recording data must be translated into before the data it contains is read by an SL-1 call accounting program.

System Administrator

The person responsible for installing, administrating and maintaining Enterprise Edge Call Detail Recording for a particular company.

Target line

A Target line is a virtual line, not a physical line. It is dedicated to receiving and routing incoming calls on DID or auto-answer trunks to a specific destination.

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